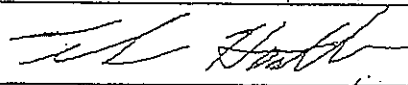
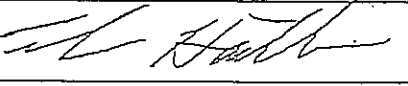
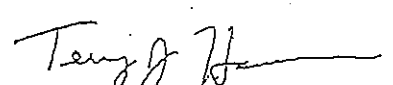


REC'D MAR 06 2002

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S&MA Mission Services Task Directive

Control No. 0111	ORG No.: QS10	PROJECT SYMBOL: RTOP-1	Contract No. NAS8-00179
Originator's Signature: Tom Hartline/QS10 		Date: 2/28/02	Originator's Priority: High
Office Manager's Signature: Tom Hartline/QS10 		Date: 2/28/02	
COTR's Approval: Terry Hamm/QS01 		Date: 3-6-02	

Subject: Advanced Project Assurance Concepts for the S&MA Advanced Projects Organization.

Background:

This is an initiative by MSFC that will identify and develop experimental or pilot S&MA approaches for the Space launch Initiative Program, which can serve as a template for future NASA high-risk missions, programs or projects. Specifically, this pilot would develop tools and models which can be utilized by S&MA practitioners to ensure proper integration into a Program which is in the early concept/ development stages.

- *MSFC Initiative* - The MSFC S&MA Office has the Vision to become the model NASA Center for Advanced Project Assurance concepts within the Project Life Cycle Process, especially during the early phases. Historically, if S&MA is not properly integrated into the Project at the concept phase, Mission Assurance becomes more difficult and costly as the Project matures. The purpose of this effort will be to identify and develop unique and innovative S&MA technologies and processes in support of the Space Launch Initiative (SLI) Program. The final product will serve as a template to be used by other NASA Centers for integration of all S&MA disciplines at every phase of the Project Life Cycle.

Task Description:

Develop innovative S&MA technologies to ensure that all of the S&MA disciplines are integrated and implemented in all phases of the Project Life Cycle including product design, manufacturing process selections, verification, testing, certification and Flight. The initial focus will be on Project early phase requirements and improvement of final flight hardware design through complete integration of S&MA disciplines, risk management and advanced assurance concepts.

Develop an integrated S&MA template to be used by the Space Launch Initiative project and other future projects to greatly increase the probability of mission success. Specific emphasis will be placed on applying all S&MA disciplines, (safety, reliability, quality) in an integrated approach when assessing concepts within the Project Life Cycle. This will ensure all aspects of mission assurance are considered and applied. In effect, a risk assurance factor can be established for processes, hardware, etc.

Incorporating lessons learned from other successful NASA programs into the design and manufacturing process.

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S&MA Mission Services Task Directive

Control No. 0111

PROJECT SYMBOL: RTOP-1

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Technical Approach

The following primary objectives provide direction for this task:

1. Ensure that a program is developed that ensures that all S&MA functional areas are incorporated in the complete Project Life-Cycle, with a focus on early project phase development.
2. Incorporating the latest advanced assurance concepts in all phases of the project.
3. Improve the final product design, through improved safety, reliability, quality and maintainability.
4. Utilize the latest data base technologies and "lessons learned" to improve the safety of the final product.
5. Integrate the methodologies into the Process Based Mission Assurance (PBMA) program to provide maximum availability and usefulness.
6. Develop a basic plan for accomplishing the above.

Deliverables:

RTOP Team

- 1) Basic Plan of guidelines for task
- 2) Interim status reports reflecting finding and innovations
- 3) End of each FY report or when a major milestone is completed

Project Assurance

- 1) Provide periodic statuses to include Monthly and Bi-Annual reports below.

Schedules/Duration:

- 1) Monthly status reports to MSFC S&MA Advanced Projects Assurance Manager and QS10 Manager.
- 2) Bi-Annual status report to Space Launch Initiative Project Managers and MSFC S&MA.
- 3) Bi-Annual status report to OSMA, NASA Headquarters, and MSFC S&MA.

Resource Estimate:

(b)(4)



Report Progress To: S&MA Project Lead

Frequency of Report

Weekly & as above